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The information in this newsletter is published for experienced repair technicians only and is not intended for use by the public. It does not contain warnings to advise non-technical individuals of the dangers that exist when servicing a product. Only experienced professional technicians should repair products powered by electricity. Any attempt to service or repair a product or products using the information in this newsletter by anyone other than a trained professional technician could result in serious injury or death. Information provided in this bulletin is subject to change or update without notice.

Five Grand Prize Winners Awarded in Samsung's \$1 Million Solve for Tomorrow National Education Contest



By Paul Yun, Assistant Manager, Op Support - Strategic Planning

Public schools from California, Florida, Minnesota, New Mexico, and New York each received more than \$100,000* in technology at a celebration in Washington, D.C.

In early March, Samsung announced the five grand prize winners in its nationwide Solve for Tomorrow contest, a competition to raise enthusiasm for science, technology, engineering, and math education among U.S. public school students. All five winners were honored in a special Washington, D.C. ceremony on April 17.

The five grand prize winners were chosen from 15 finalists. The five grand prize winners are:

Franklin High School, Los Angeles, CA	http://tinyb.it/1D52C1EBC8AD
Leewood K-8 Center, Miami, FL	http://tinyb.it/5052C1ED3E14
Forestview Middle School, Baxter, MN	http://tinyb.it/5852C306FBA
Arrowhead Park Early College, Las Cruces, NM	http://tinyb.it/152C1F6680E
MS 88/Peter Rouget Middle School, Brooklyn, NY	http://tinyb.it/3D52C1F98CBA

Franklin High School won the Community Choice Award with nearly 80,000 public online votes, MS 88/Peter Rouget Middle School won the Samsung Employees Choice Award, and the other three winners were chosen by a panel of judges. Each of the five grand prize winning schools will receive more than \$100,000* in technology ranging from products such as smart boards and LED TVs to printers, laptops, and software. The 10 remaining finalists will receive \$40,000* in technology from Samsung, the Adobe Foundation, and DIRECTV.

"The excitement this contest creates is wonderful," said David Steel, Executive Vice President of Corporate Strategy for Samsung Electronics North America. "The public voting portion of the contest received a strong response from the online community. That kind of support is fantastic. Congratulations to all the winning schools as well as the other 10 finalists. We hope that the challenge of this contest, together with the technology for winning schools, will help spark students' passion to pursue careers that help improve the world through STEM (Science, Technology, Engineering, and Math)."

As part of their prize package, the five winning schools also have the option to host a community e-waste recycling day through Samsung Recycling Direct, an e-waste program which has recycled more than 250 million pounds of electronic waste in the United States since the 2008.

The Solve for Tomorrow contest is part of Samsung Hope for Children, the company's philanthropic initiative focused on helping children lead healthier, smarter, and more sustainable lives.

Five Grand Prize Winners Awarded in Samsung's \$1 Million Solve for Tomorrow National Education Contest



continued

For the first time, Samsung's CSD Department participated in the program by providing a special service program. The prize package for the 15 finalists includes a dedicated school support contact, on-site product training and maintenance service, online training, and an extended warranty plan.

The 15 finalist videos can be seen at www.samsung.com/solvefortomorrow.

* Estimated Retail Value

About Samsung Hope for Children

Samsung Hope for Children represents Samsung's philanthropic commitment in the U.S. to help improve children's health, education and sustainability. Since 2002, Samsung Electronics America and its retail and business partners have helped more than 400 schools, community-based foundations, and charities throughout the U.S. raise awareness of and funding for their causes. For more information, please visit: www.samsung.com/hope.



This article was sourced from Theresa Cha, CBD Marketing Communication.

Multiple Parts Usage: An Overview

By Scott Whitman, Senior Manager, CE Product Support



I wanted to take a few minutes to discuss multiple parts usage and the two most common repair problems. For clarity, this will pertain mainly to TV models, but could easily be adapted to all product groups.

With component level repairs, there are many circumstances where the failure of one part can damage surrounding, supporting parts. This is especially true in power supplies that use switch mode (or variable frequency) controls to regulate the supply voltages. However; when you move to board level repairs, the situation changes since each board is designed to stand alone. It is very rare for one major board to cause another board to fail. It is so rare, in fact, that if it were to happen on a Samsung TV, we would send out a service bulletin describing the failure and specifying the fix.

An exception to this rule is failures caused by external sources, such as a power surge or lightning. These are obviously not covered under warranty anyway, but could result in multiple board failures

With the tighter guidelines for single board repair currently in place, replacing multiple boards is not a reasonable option. To troubleshoot repair issues, you need to combine training, knowledge, and all available sources of information to get to the right answer.

Intermittent Failures:

Intermittent failures are often the hardest to troubleshoot, let alone narrow to a single board. There are, however, various ways to improve troubleshooting success:

- Get Hands-on Training.
- Use GSPN for service tips and Service Bulletins.
- Call the Samsung Technical phone support team.
- Capture emergency log files (to be sent to technical support for analysis).
- Employ logical divide and conquer troubleshooting using training manual block diagrams.
- Use the Service App (which communicates directly with the factory [for TVs]).
- Last, don't "guess". If you don't see the issue, can't verify the symptom exists, don't replace parts.

No Video:

This symptom requires further testing on-site or in front of the TV. But, as with intermittent failures, guessing is not and should not be an option. We expect that you will need to take more than one board on-site due to FTF (First Time Fix) demands. However, once you are in front of the TV, troubleshooting to board level failure should follow a logical order. All current Samsung TV's have methods to isolate the power supply control, main board, and panel. Most have test patterns that you can access - even if there is no video on the screen - and use to isolate the defect to the main board or the panel. You can access all these test patterns without any test equipment. Also, troubleshooting information is available via:

- GSPN
- Hands-on training at one of our Regional Training Centers. (Contact the Samsung Training Department.)

Multiple Parts Usage: An Overview

continued



- Plus One
- Samsung Technical phone support

Summary:

There is, as you can see, very little reason or excuse for technicians to use multiple boards during a normal repair. For any repair, the best tool any technician can take with them is knowledge. Education is the one major factor that will improve any skill set. Samsung has two dedicated RTCs (Regional Training Centers) to support the ASC network, plus a full time training staff creating content and available to travel to and train on location when requested. The small amount of time you expend on training will be returned many times in productivity. The ROI makes sense. Do it!

Also, when on site, don't hesitate to use the Samsung Technical phone support line. The Samsung employees manning the phone support line have over a hundred years of combined, seasoned experience. Put their knowledge and experience to work for you.

To conclude, using any part that is not needed for a repair just doesn't make sense, dollar-wise or logic-wise. Currently, our department is monitoring all warranty invoices for multiple parts, as you are well aware. In the near future, those who do not improve will have further guidance requirements placed on them.

Let us help you to improve today.

Samsung Field Service Announces 2013 KPI Definitions and Measurements

By Stanley Sherrard, Senior Manager, Field Service



To ensure we continue to provide world class service to all customers, Samsung Field Service has determined the Key Performance Indicators (KPI) which we will focus on this year. Definitions of the KPIs plus calculations and examples are below:

1) Quality of Service (QOS)

Definition: The results of our customer satisfaction survey conducted upon the implementation of an In Warranty claim. Specifically, the response to the question: How would you rate your overall service experience?

Calculation: Average Score from the survey using a 7 point system (1 Best – 7 Worst)

Scale (Score): 1 (100), 2 (83.3), 3 (66.7), 4 (50), 5 (33.3), 6 (16.7), 7 (0)

2) Customer Turn Around Time In Home (CTAT IH)

Definition: Repair turn around time for an In Warranty In Home repair, from the customer's first request to the repair completion.

Calculation: The number of days from the service ticket creation date to repair completion date.

If a cancelled ticket exists within the previous 30 days of the service ticket creation date, the CTAT starts with the creation date of the original cancelled service ticket.

- Examples:**
1. Ticket created March 1st, repair completed March 5th: 4 Day CTAT
 2. Ticket created March 5th, ticket cancelled March 9th because servicer was unable to contact the Customer. New ticket created March 12th, repair completed March 15th: March 5th to March 15th = 10 day CTAT.
 3. Ticket created March 10th, ticket cancelled March 15th because part is not available. Part becomes available on March 25th, new ticket created on March 25th, repair complete date March 30th: March 10th to March 30th = 20 Day CTAT.

3) Customer Turn Around Time Carry In (CTAT CI)

Definition: Repair turn around time for a Carry In repair, from the date the customer drops off the product to the repair completion date.

Calculation: Number of days from product drop off to repair complete. If a cancelled ticket exists within the previous 30 days of the service ticket creation date, the CTAT starts with the creation date of the original cancelled service ticket.

Example: Ticket created March 1st, customer drops off unit March 5th, repair completed March 7th: 2 Day CTAT.

Samsung Field Service Announces 2013 KPI Definitions and Measurements



continued

4) Long Term Pending (LTP)

Definition: Percentage of Long Pending tickets among total pending tickets (In and Out of Warranty counted).

(Classification of Long Pending ticket: Carry In - over 3 days; In Home - over 7 days)

Examples: 4 day old Carry In ticket (from unit received date*) is an LTP ticket.

8 day old In Home ticket (from ticket creation) is an LTP ticket.

*LTP is currently calculated from ticket creation date. To be changed to unit received date soon.

Calculation:
$$\frac{\text{Number of Long Term Pending tickets}}{\text{Total Repair Pending} + \text{Complete}} \times 100$$

** The complete date is the day the ticket is updated in GSPN. If you complete Monday's completed tickets in GSPN on Tuesday, the tickets count as completed on Tuesday since Tuesday is the update date in GSPN.

An example of a Monthly LTP calculation:

Item	Day 1	Day 2	Day 3	Month LTP
LTP Tickets	2	3	2	7
Total Pending Tickets	15	14	13	42
Completed Tickets	5	5	6	16
Pending + Completed	20	19	19	58
LTP %	10%	15.8%	10.5%	12.1%

5) Repeated Repair Ratio (REDO)

Definition: Percentage of items which were serviced 2 times or more among all service orders within 90 days.

Calculation:
$$\frac{\text{Number of Repeated repairs within 90 days}}{\text{\# of Service Orders}} \times 100$$

2013 change: REDO is now based on Ticket creation, not on warranty claim submission as in the past.

Example: Total Number of Repeated repairs within 90 days: 2

Total # of Service Orders = 80

REDO for that period = 2.5%

Samsung Field Service Announces 2013 KPI Definitions and Measurements

continued



Please note that if you use one of the cancel reasons below, the ticket will count towards a REDO:

- Cancelled by ASC – Product Replaced by dealer.
- Cancelled by ASC – No Trouble Found and Unit Operating Properly.

Important: You should not complete a ticket until the actual repair takes place as multiple completed tickets count as REDO.

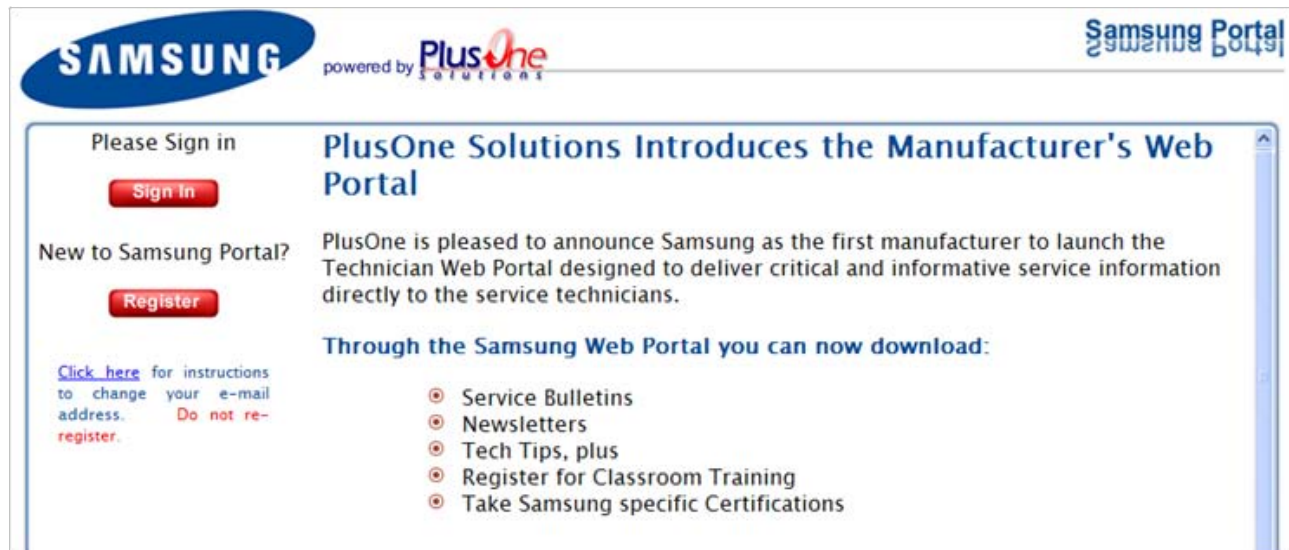
We hope that these clear guidelines help you understand our KPIs and assist you in achieving your 2013 targets.



2013 TV Training Now Online on Plus 1!

Samsung is pleased to announce that the 2013 TV training course is now online. Keep your skills up to date. Learn to repair Samsung's latest models. Take the course and get certified now!

Click here to access Plus 1: <https://my.plus1solutions.net/clientPortals/samsung/>



For 2013, we've consolidated the online TV training into one course/one test.

[2013 Samsung TV Certification Course](#) (Video - Released 3.31.2013) - This training covers 2013 TV product and repair in detail. Take this course to learn all you need to know to repair Samsung 2013 TVs. Technicians must also take and pass the [2013 Samsung TV Certification Exam](#), either in a live class or on Plus 1, by 7/31/13 to obtain Panel Certification for the year.

We encourage you to obtain certification as soon as you can so you'll have the skills you need to repair 2013 TVs and provide exceptional service to our mutual customers.

Don't wait. Update your skills. Start the TV training course today!

The Samsung Training Department



2013 HA Training Now Online on Plus 1!

Samsung is pleased to announce that the 2013 HA training courses are now online. Keep your skills up to date. Take the courses and get certified now!

New Courses

2013 Samsung Refrigerator Certification Training

2013 Samsung Laundry Certification Training

2013 Samsung Dishwasher Certification Training

2013 Samsung Range Certification Training

2013 Samsung Microwave Certification Training

New Tests for Certification

2013 Samsung Refrigerator Certification Test

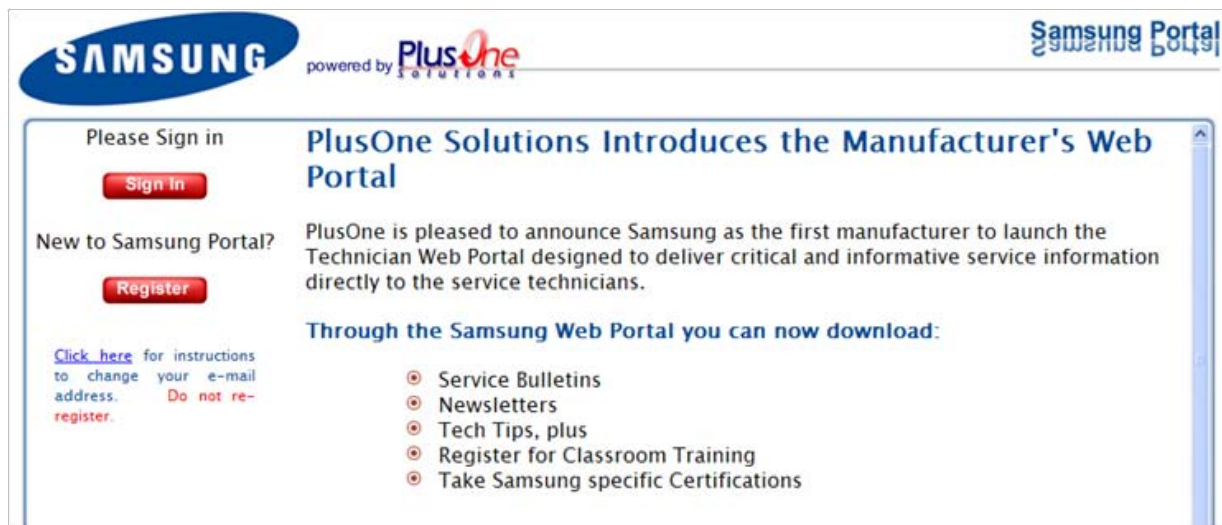
2013 Samsung Laundry Certification Test

2013 Samsung Dishwasher Certification Test

2013 Samsung Range Certification Test

2013 Samsung Microwave Certification Test

Click here to access Plus 1: <https://my.plus1solutions.net/clientPortals/samsung/>



Take these courses to learn all you need to know to repair Samsung HA products. Technicians must take and pass the **2013 Samsung HA Certification Exams**, either in a live class or on Plus 1.

We encourage you to obtain certification as soon as you can to get the skills you need to repair Samsung HA products and provide exceptional service to our mutual customers.

Don't wait. Update your skills. Start an HA training course today!

The Samsung Training Department

2013 Samsung RTC TV Training

By Jim Foster, Manager, Training



Samsung TV Training 2013

Being held at one of our Regional Training Centers and at select locations!

For 2013, by popular demand, Samsung continues to accommodate your demanding schedule with one day update training. To be eligible to attend the one day training session, you must have attended and successfully completed 2012 TV product training in one of our training centers, or at a live, on-site training session.



Samsung will still hold 3 day Basic classes quarterly. These classes are intended for new techs who have never attended a Samsung training or for techs who need extra help to improve their skills.

Attend in-depth, hands-on 1 day Update or 3 day Basic training at one of our RTCs in Little Ferry, NJ or Bensenville, IL! In addition, we will be holding limited on-site trainings at various locations around the country. You can reserve your seat in training by emailing us at training@sea.samsung.com

You can always obtain the most up to date training list by sending an email to training@sea.samsung.com

Additionally, TV training is available on-demand 24/7 at <https://my.plus1solutions.net/clientPortals/samsung/>

Training Schedule:

Date	City	Comments
May 10, 2013	Fort Lauderdale	FE/ASC 1 day Update Training (Class Full)
May 21, 2013	Bensenville, IL	FE/ASC 1 day Update Training (Session 1)
May 22, 2013	Bensenville, IL	FE/ASC 1 day Update Training (Session 2)
May 23, 2013	Bensenville, IL	FE/ASC 1 day Update Training (Session 3)
May 24, 2013	Bensenville, IL	FE/ASC 1 day Update Training (Session 4)
June 4, 2013	Little Ferry, NJ	FE/ASC 1 day Update Training (Session 1)
June 5, 2013	Little Ferry, NJ	FE/ASC 1 day Update Training (Session 2)

2013 Samsung RTC TV Training

continued



Date	City	Comments
June 6, 2013	Little Ferry, NJ	FE/ASC 1 day Update Training (Session 3)
June 7, 2013	Little Ferry, NJ	FE/ASC 1 day Update Training (Session 4)
June 6, 2013	Dover, DE	MAC Convention
June 7, 2013	Dover, DE	MAC Convention
June 11 – June 13, 2013	Bensenville, IL	FE/ASC 3 day Basic Training
June 25 – June 27, 2013	Little Ferry, NJ	FE/ASC 3 day Basic Training

2013 Samsung RTC Home Appliance Training

By Jim Foster, Manager, Training



Samsung HA Training 2013

For 2013, per popular demand, Samsung continues to accommodate your demanding schedule with two day update training. To be eligible to attend the two day training session, techs must have attended and successfully completed 2012 product training in one of our training centers, or at a live, on-site training session.

Samsung will still hold 4 day Basic classes quarterly. These classes are intended for new techs who have never attended a Samsung training or for techs who need extra help to improve their skills.

Attend in-depth, hands-on 2 day Update or 4 day Basic training at one of our RTCs!

You can reserve your seat in training by emailing training@sea.samsung.com

Additionally, Home Appliance training is available on-demand 24/7 at <https://my.plus1solutions.net/clientPortals/samsung/>

Training Schedule:

Date	City	Comments
May 21 – May 22, 2013	Little Ferry, NJ	ME/ASC 2013 products 2 day Update Training (Session 1)
May 23 - 24, 2013	Little Ferry, NJ	ME/ASC 2013 products 2 day Update Training (Session 2)
May 28 – May 29, 2013	Bensenville, IL	ME/ASC 2013 products 2 day Update Training (Session 1)
May 30 - 31, 2013	Bensenville, IL	ME/ASC 2013 products 2 day Update Training (Session 2)
June 7, 2013	Dover, DE	MAC Convention
June 17 – June 18, 2013	Bensenville, IL	ME/ASC 2013 products 2 day Update Training (Session 1)
June 19 – June 20, 2013	Bensenville, IL	ME/ASC 2013 products 2 day Update Training (Session 2)
June 18 – June 19, 2013	Little Ferry, NJ	ME/ASC 2013 products 2 day Update Training (Session 1)
June 20 – June 21, 2013	Little Ferry, NJ	ME/ASC 2013 products 2 day Update Training (Session 2)

Stopping REDO Stopping REDO

Stopping REDO: Random Lockups in UN**ES7500/UN**ES8000 LED TVs

By Scott Whitman, Senior Manager, CE Product Support

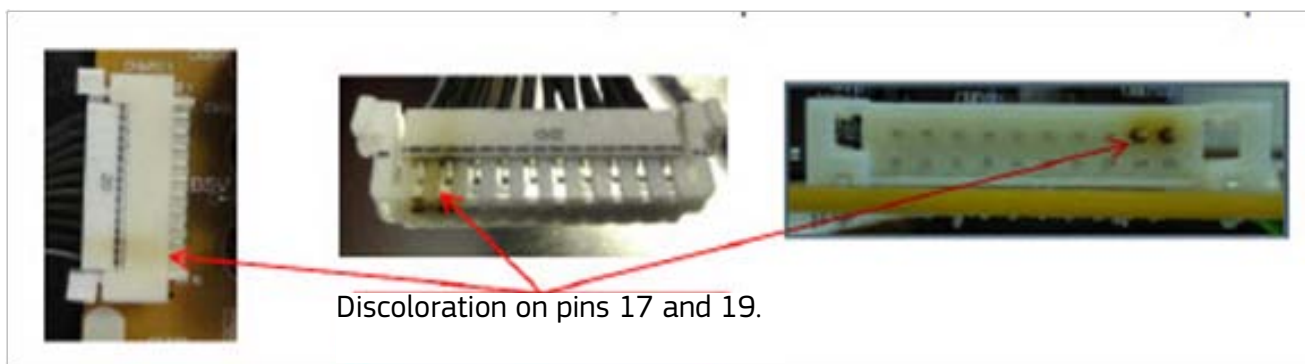


At the top of the list for May REDO is the same issue as last month: The random lockup of UN**ES7500 through UN**ES8000 LED TVs along with a frozen image resulting in a power cycle (the TV turns off and then back on). The symptom can occur anytime after the SMARTV boot up logo disappears from the screen.

A service bulletin has been released to cover this issue, but let's go over it again here due to the ongoing misdiagnoses that are occurring in the field.

The primary parts that you need to take on-site are the SMPS and the cable between the power supply and main board (LEAD CONNECTOR-POWER CABLE). The second possibility is the LVDS cable and T-con, although this is more likely to occur only on early production TV's.

Once on-site, and before you replace any parts, remove the cable at the SMPS and inspect it for any discoloration. The discoloration will appear as a slight, brownish color centered around the 5VDC pins on either the connector or plug. If this discoloration is visible, replace both the cable and the SMPS.



If you have any doubts, contact Technical Support for assistance in tracing the issue down to board level.

Stopping REDO Stopping REDO

Stopping REDO: How to Identify DMD Board Failures

By Jorge Tavora, CE and HA Tech Support Manager

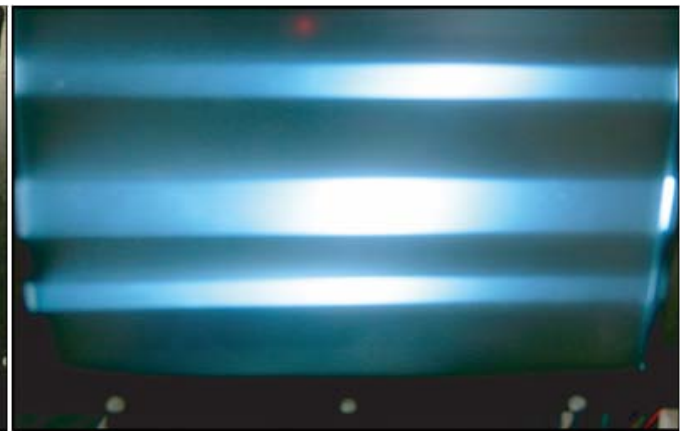


Here's an oldie but a goodie. Some techs out there are still having difficulty determining when the DMD board is bad. Here are a few examples of what the picture looks like when the DMD board is malfunctioning.



40 Vertical lines 16 pixels wide:

→ Replace the DMD Board.



Horizontal bar or no Raster:

→ Replace the DMD Board.



Dotted Vertical lines:

→ Replace the DMD Board.



Beehive mosaic patterns all over the screen:
The H sync signals are not transferred to
DDP3021.

→ Replace the DMD Board.

Stopping REDO Stopping REDO

Stopping REDO: How to Identify DMD Board Failures

continued

To identify a DBD board failure, follow these steps:

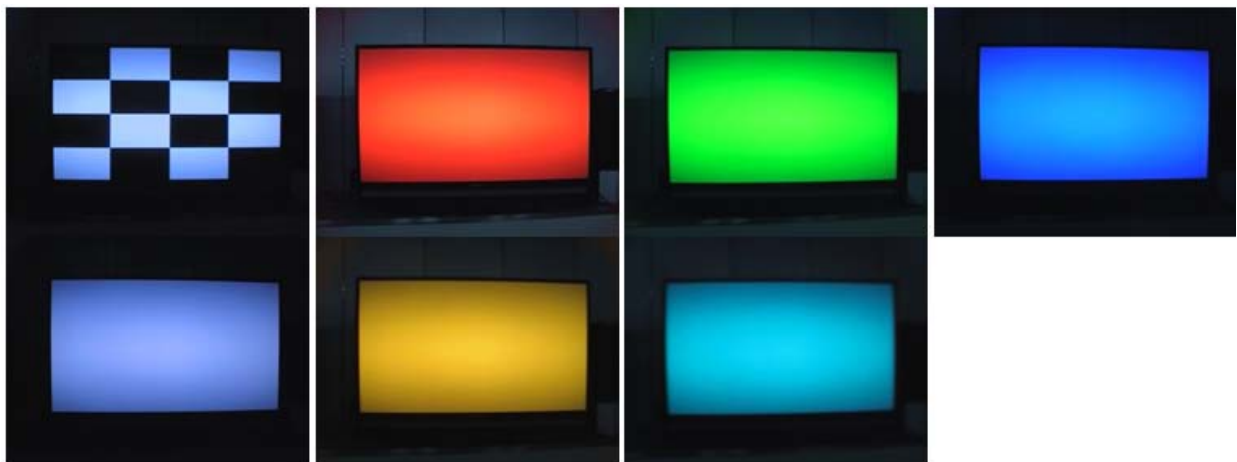
1. On the remote control, press Power off → Mute + 1 + 8 + 2 → Power on to access the Service Mode, and then access DDP3021.



2. Access Test Pattern.



3. If you press the right arrow key "►", you can see the various Test Patterns.



If the patterns are displayed correctly, the problem is NOT caused by a DMD Board failure.

I hope this helps you determine when the DMD board is faulty. If you are not sure, take a picture of the screen and either submit the PENDING ticket to "Tech Support Needed" or email it to technicalsupport@sea.samsung.com for review.

Quick Tip: Mini Components

By Michael Vigliotti, Assistant Manager, Product Support



Samsung is producing many more Mini Component models this year than in the past. Consequently, we would like to share as much information as we can about the product since it will be new technology for most of you. Our Mini Component line up includes two book-shelf sized models that are designed for home use and two high-end models with large speakers that can be used as professional DJ equipment or at large parties. All the units give you the ability to play CDs, stream Bluetooth, and even sing and record Karaoke to your favorite songs.

- Book shelf models: MX-F630 and MX-F830
- High End models: MX-FS8000 and MX-FS9000 (pictured below)



We recently improved the firmware for the MX-F6** models. The improvements fixed an issue that caused some speakers to have a popping sound and fixed an issue with Full CD Recording. To install these improvements, please update the firmware to 1006.0 or higher.

How to update firmware:

1. Download the latest firmware from GSPN.
2. Save the firmware to the ROOT drive on any USB stick.
3. Insert the USB stick into the Mini Component unit.
4. Change the function on the MX-F6** to USB.
5. The firmware will automatically update and the unit may power off automatically.

UN55F8000 Power-Up Sequence

By Juan Morales, Regional Technical Trainer



The UN55F8000 powers-up in the following sequence:

- 5.3VDC on the A5V pin when the AC cord is connected.
- The Micro on the Main PCB actively looks for the user to press Power.
- When Power is pressed, the Micro sends a “High” voltage (0-3.5VDC transition) to the SMPS via the PWR_ON/OFF pin, to activate the rest of voltages.
- Note: The SMPS may be “forced on” by simply disconnecting the wire harness between the SMPS and Main PCB .
- Upon the 0-3.5VDC transition on the PWR_ON/OFF pin, the following voltages are activated on CNM803.
 - Vamp $\approx$ 18VDC
 - B13V $\approx$ 13VDC
 - B5V $\approx$ 5VDC
- Approximately two seconds later, 5VDC is applied to the BLU_ON/OFF pin.
- Once the BLU_ON/OFF pin is activated, the LED arrays will turn on .
- CNL80A and CNL802B supply high voltage to the LED arrays.
- The “positive” pins will carry a steady voltage of 35VDC.
- The “negative” pins will carry a voltage which will vary between 1 and 10VDC depending on how bright the section of the screen needs to be:
 - 1Vdc = Brighter screen
 - 10Vdc = Darker screen



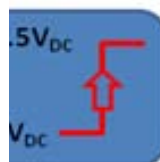
2	SD	LD	1
4	Contact	GND	3
6	VAMP	B13V	5
8	SERIAL_STT	B13V	7
10	SERIAL_DATA		9
12	SERIAL_UHR		11
14	SERIAL_EN0		13
16	VSYNC_IN		15
18	B13V	B13V	17
20	BLU ON/OFF	VAMP	19
22	GND	VAMP	21
24	GND	GND	23
26	GND	B5V	25
28	PWR ON/OFF	B5V	27

CNM 803



2	SD	LD	1
4	Contact	GND	3
6	VAMP	B13V	5
8	SERIAL_STT	B13V	7
10	SERIAL_DATA		9
12	SERIAL_UHR		11
14	SERIAL_EN0		13
16	VSYNC_IN		15
18	B13V	B13V	17
20	BLU ON/OFF	VAMP	19
22	GND	VAMP	21
24	GND	GND	23
26	GND	B5V	25
28	PWR ON/OFF	B5V	27

CNM 803



UN55F8000 Power-Up Sequence

continued



SMPS Power Board of LED F8000 Series

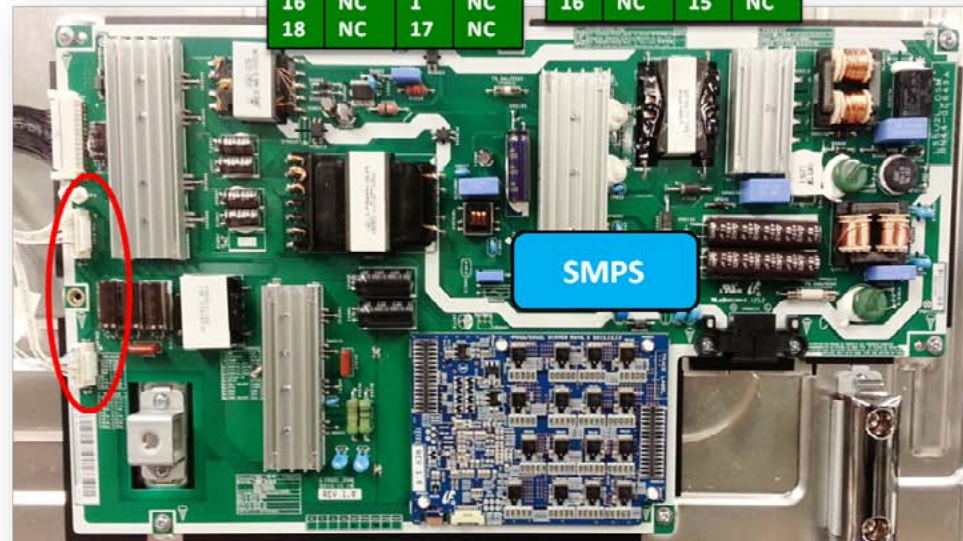
SMPS Board To LEDS

CNL 802A

CNL 802B

2	L4-	1	L8-
4	L3-	3	L7-
6	L2-	5	L6-
8	NC	7	NC
10	+	9	+
12	NC	11	NC
14	L1-	13	L5-
16	NC	1	NC
18	NC	17	NC

2	R1-	1	R5-
4	R2-	3	R6-
6	R3-	5	R7-
8	NC	7	NC
10	+	9	+
12	NC	11	NC
14	R4-	13	R8-
16	NC	15	NC



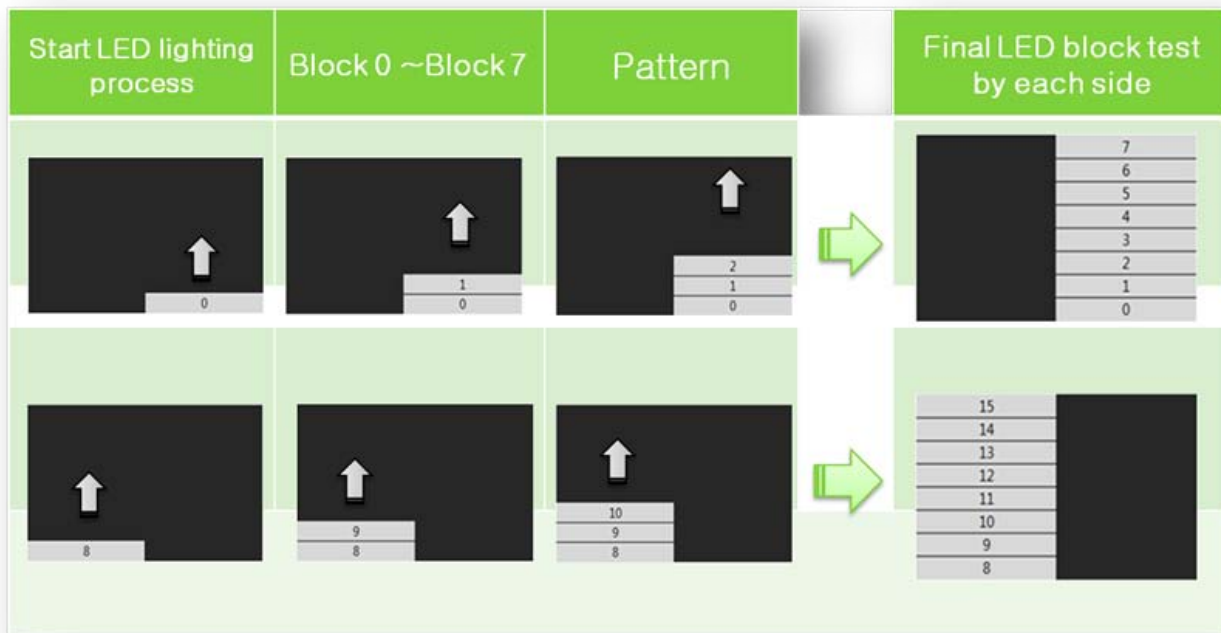
UNxxF8000 Local Dimming Test

By Juan Morales, Regional Technical Trainer



The F8000 Series LED TVs let you verify that all LED arrays are operating properly by running a built in test pattern called Local Dimming Test.

- This test will light up the 16 LED arrays individually, starting on the right bottom corner as shown in the graphic below.



- You can access the test pattern using a standard remote control by pressing MUTE+4+1+9+EXIT.
- When you run the test pattern, if one of the sections appears to be dim or does not light, verify the voltages coming from the power supply are correct BEFORE replacing the panel.
- To verify correct SMPS operation:
 - Disconnect the SMPS from the Main PCB to force the backlights to come on.
 - Verify that ALL the pins on the harnesses going to the panel labeled with a “negative” sign (L3-, R5-, L8- etc...) are close to 0Vdc.
 - If any of those voltages are high, suspect a defective SMPS.
 - In some cases, it may be necessary to unload the SPMS by disconnecting the harnesses going to the panel.

UNxxF8000 Local Dimming Test

continued



- This condition should also make ALL the pins on the harnesses going to the panel labeled with a “negative” sign (L3-, R5-, L8- etc...) close to 0Vdc.
- Once again, if any of those voltages are high, suspect a defective SMPS.

SMPS Power Board of LED F8000 Series

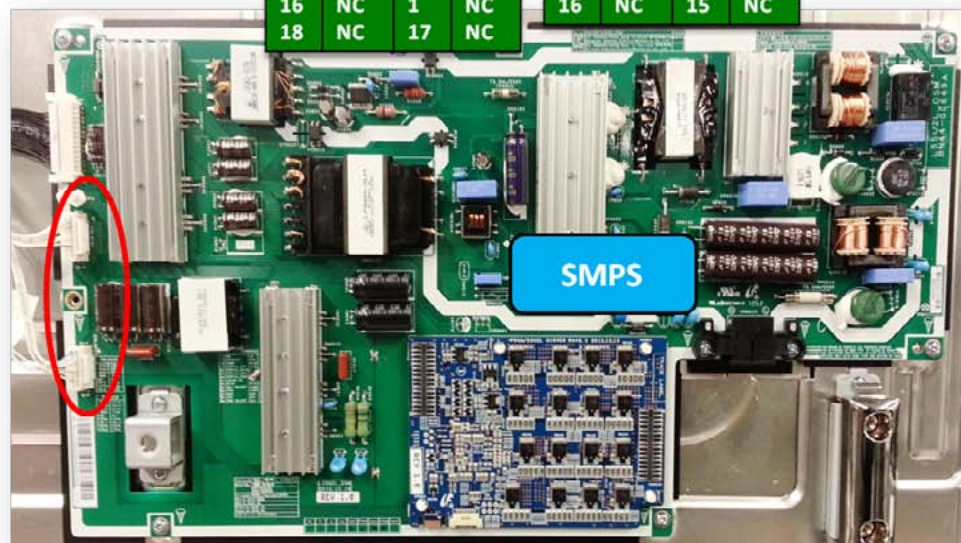
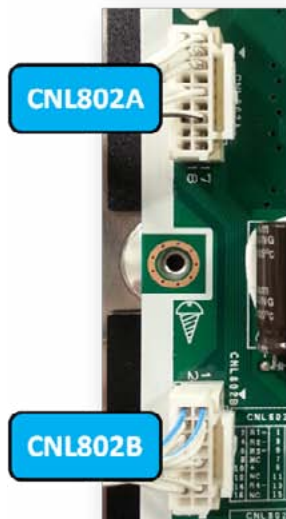
SMPS Board To LEDS

CNL 802A

CNL 802B

2	L4-	1	L8-
4	L3-	3	L7-
6	L2-	5	L6-
8	NC	7	NC
10	+	9	+
12	NC	11	NC
14	L1-	13	L5-
16	NC	1	NC
18	NC	17	NC

2	R1-	1	R5-
4	R2-	3	R6-
6	R3-	5	R7-
8	NC	7	NC
10	+	9	+
12	NC	11	NC
14	R4-	13	R8-
16	NC	15	NC



2013 Bluetooth Module Troubleshooting

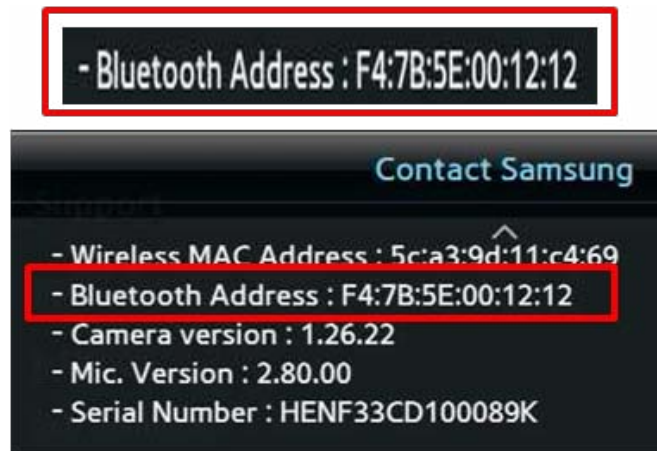
By Chuck Russo, Assistant Manager, Training



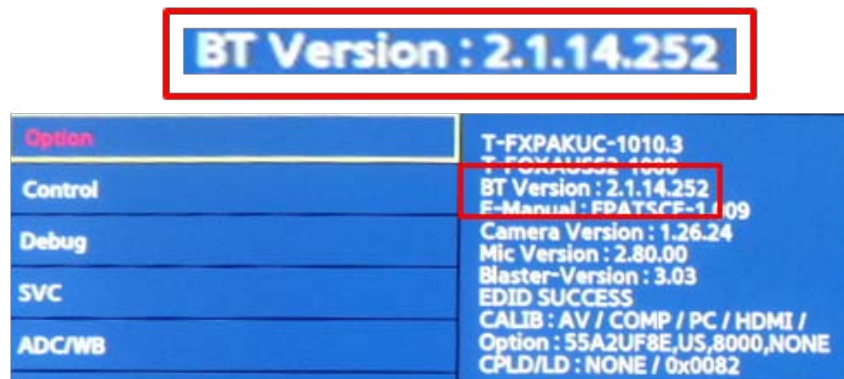
New additions to the Contact Samsung Menu and Factory Service Mode screens have made troubleshooting the 2013 Bluetooth modules more direct and easier.

To troubleshoot the 2013 Bluetooth module, follow these steps:

1. Check Bluetooth Address on the TV's "Contact Samsung" support menu.



2. Check the Bluetooth F/W Version on the Factory Mode screen.



3. If errors exist in either, then check the BT Module Connector Voltages in both the Standby and TV Power-On conditions:

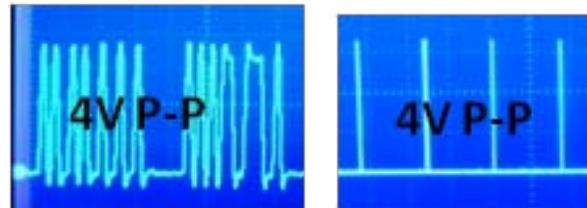
Pins	1	2	3	4	5	6	7	8	9	10
Standby	3.3VDC	0	3.3VDC	5.3VDC	0	0	0	0	0	0
Power On	3.3VDC	3.3VDC	3.3VDC	5.3VDC	1.0 BT Sig	2.1 BT Sig	0	.02 Sync Pulse	0	0

2013 Bluetooth Module Troubleshooting

continued



The Bluetooth Sig and Sync Pulse voltages in the table on the previous page are their effective DC Readings. If a scope isn't available, use a standard Multi-Meter for measurements.



- If the DC voltages are missing, check the cable and Main Board feed.
- If the voltages are OK, but the BT Sig. pins (DC Ref.) voltages are missing, the BT Module is likely defective.

CE GSPN Updates

By Jeff Brutman, Senior Staff, Publications



We encourage you to use our GSPN site to find the latest service bulletins to aid you with your repairs:

<http://gspn3.samsungcsportal.com/>

CE Service Bulletins uploaded to GSPN in April, 2013:

Bulletin Number	Subject	Applicable Models
ASC20130429001	Subject: Power Cycling / Reset Symptoms: • The TV may display vertical lines or a frozen image on the screen and then power OFF and ON by itself. • The WD Count in Service Menu>Control>Sub Option is higher than 0.	UN46ES7500, UN55ES7500, UN60ES7500, UN46ES7550, UN55ES7550, UN60ES7550, UN46ES8000, UN55ES8000, UN60ES8000

To access service bulletins on GSPN, first visit <http://gspn3.samsungcsportal.com/>. Login using your User ID and Password. Click on “Knowledge” at the top, then “Product Info” in the left column. The Product Information menu will appear. Click on “Service Bulletin (Local)” to bring up the Service Bulletins (Local) screen. To search for a bulletin, enter the bulletin number in the Subject field on the left side of the screen, and then click the Search button on the far right. If for some reason the bulletin does not appear, you can still search for it using the “Category” drop-down menus, the Subject field, or the Model field. You can also try using the Search field at the top of the screen.

Washers: The Pure Cycle Function

By Kyeong Tae Lee, Assistant Manager, HA Product Support



Models: Pure Cycle Washers only

Subject: The Key Benefits of using Pure Cycle™

- Eliminates 99.5% of odor-causing residue in the wash drum.
- No chemicals or additives are needed.
- Never needs replacement.

How it works:

- Pure Cycle™ uses hot water (158° F) and a long spin cycle to create an abrasive effect on the wash drum, eliminating residue and odor.

To use the Pure Cycle™ function, perform the following steps:

- Press the Pure Cycle™ Button.
- Press the Start Button.
- No other actions are needed!



Pictured above is the display from the WF220. Display layout varies from model to model.

How often should Pure Cycle™ be used?

- Run Pure Cycle approximately 1x per month (or after about every 40 loads).
- An indicator code lets you know when to run the cycle.
- The cycle lasts between 50~120 minutes.

Important: NEVER place clothes and detergent in the washer when you are running a Pure Cycle.

The New Style Refrigerator Inverter Board

By Nicholas Webert, Regional Technical Trainer



Samsung's new 2013 refrigerators have a redesigned inverter board. Here are some of the important changes you need to be aware of:

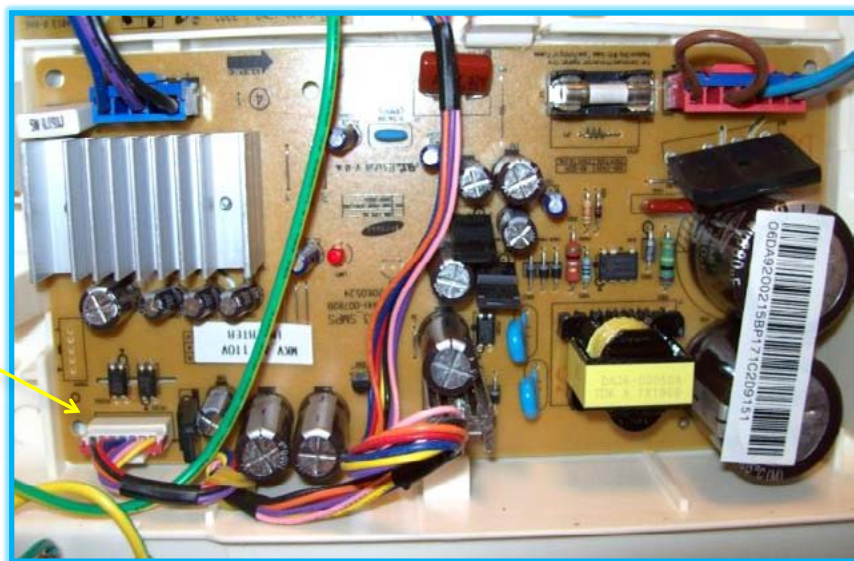
- The new inverter board is not compatible with the old style inverter board.
- Troubleshooting AC in and the compressor control pin out has not changed from the old style board, but the new inverter board supplies +13V and +5V input to directly to the main board. So, if the Fridge is dead, check for low voltages coming from the inverter.

New Style Inverter Board

New style additions

CN103			
1	13.2V	YEL	
2	13.2V	PNK	
3	5V	PRP	
4	GND	BLU	
5	GND	RED	
6	RPM	ORG	
7	FB	BLK	

Same as old style



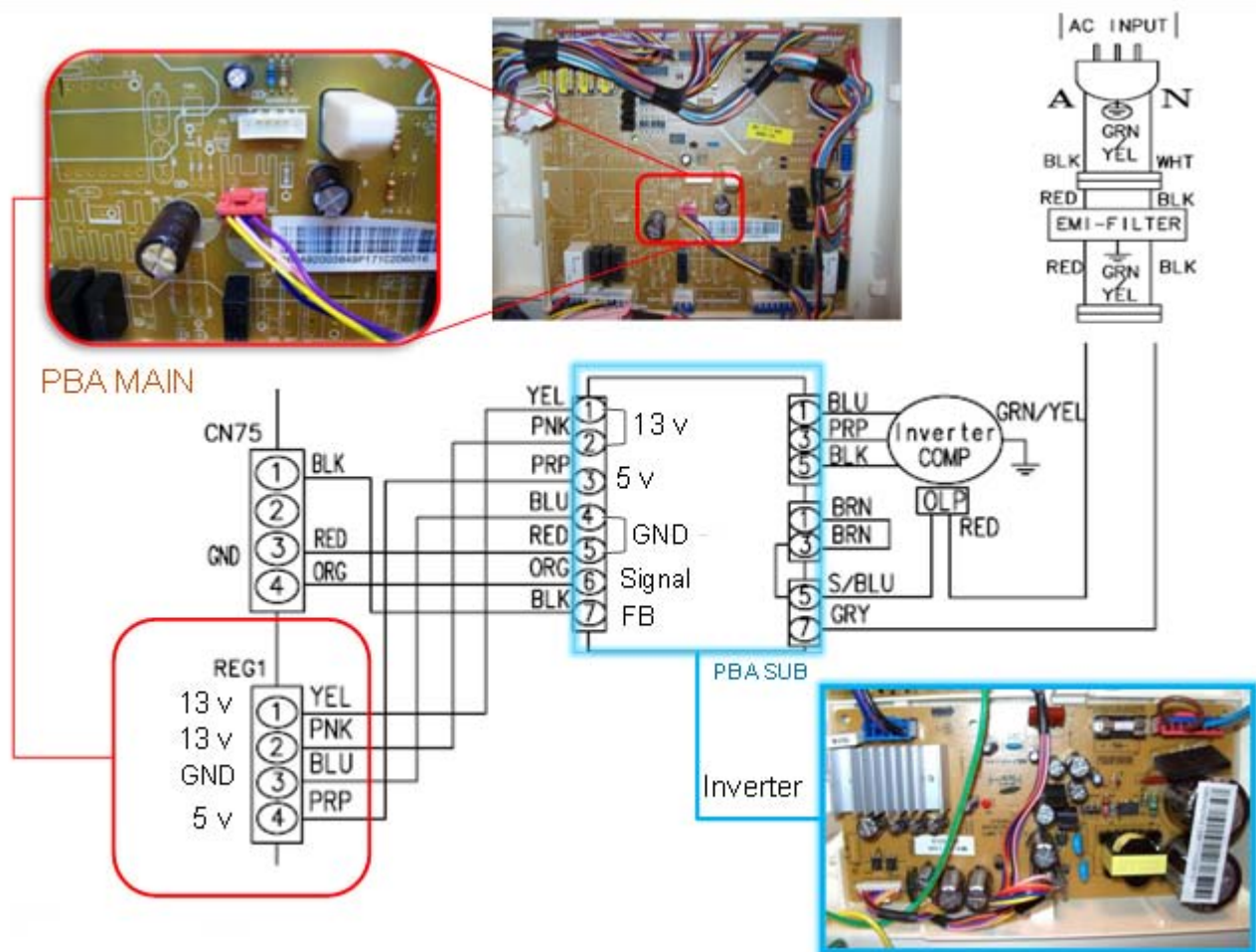
Also, notice one harness on the new inverter board (CN 103) splits off into 2 separate connectors on the main board. CN75 on the main board has the signal, ground, and feedback while the REG1 connector carries the 13v and 5v supplies to power the main board. The board layout in the service manual does not indicate what is supplied at the REG1 connector. This information is, however, shown in the circuit diagram. In addition, note that the compressor overload is not in the same circuit position as in the old style inverter board. In the new style board, it has been relocated from the BRN portion of the harness to the LINE IN to the inverter board. If the overload opens, the compressor will

The New Style Refrigerator Inverter Board

continued



still turn off. However, in the new configuration, the low voltage supplies to the main board will also be interrupted. Consequently, if the overload opens, the refrigerator will not function at all.



By applying the new knowledge above and your experience from testing the old inverter board, you should be prepared to tackle “no cooling” issues on new Samsung refrigerators. Don’t forget to pull the Fast Track manual for the model you are working on to assist with all component testing including the new and old inverter boards

Frozen Water Tank, No Ice, No Water, and a Water Leak

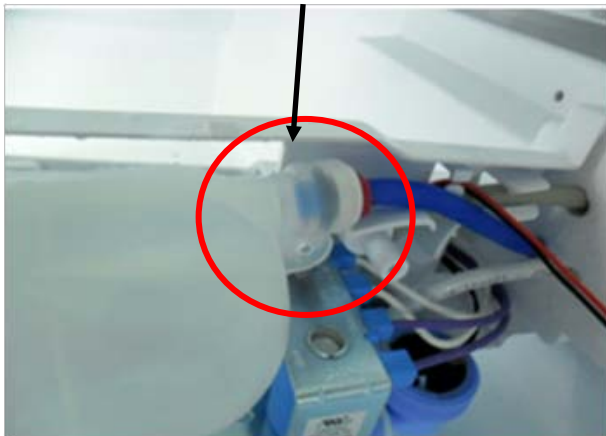
By Wes Sirois, Manager, HA Product Support



Models: RF4267HARS, RF4267HABP, RF4267HAWP

Symptoms: No water dispenses and/or no ice is produced and/or water leaks in the fresh food section.

Water frozen here



Damaged plunger and water leaks



Background: The damper under water tank is not seated properly or is partially broken. See the pictures below. This causes below-freezing temperatures at the water tank



Factory Solution: The old damper was replaced by a modified damper beginning with March, 2013 production.

Field Solution: The damper replacement part has been modified to improve fit and prevent improper seating. To resolve this issue, replace the damper and water tank assembly. Even if the water tank does not leak, the valve plunger may have been damaged.

Frozen Water Tank, No Ice, No Water, and a Water Leak

continued



Parts Needed



DA97-11340A ASSY CASE WATER FILTER TANK



DA97-08430A ASSY INS-DAMPER CONV

New Anti-Tip Bracket Design for Samsung Ranges

By Jason Abrams, Assistant Manager, HA Product Support



Every range that Samsung produces ships with an anti-tip bracket that must be installed when the range is installed. The previous version of the bracket, shown below, could only be attached to the floor. Looks simple enough to install, but if the flooring was anything other than wood (ceramic or tile, for example), it was difficult to secure the anti-tip bracket to the floor.



Old Anti-Tip Bracket

Part Number DG97-00120A

Due to the difficulty that installers had securing the older anti-tip bracket to floors made of materials other than wood, the anti-tip bracket design was changed so that the bracket could be secured to the wall or the floor. New screws were added to the bracket kit for wall installation. These screws go through the center two holes on the bracket (circled in the illustration below). The new anti-tip bracket comes with all the hardware required for both wall and floor installation and a template with instructions. Follow the instructions on the template for correct installation.



New Anti-Tip Bracket

Part Number DG94-00870B

HA GSPN Updates

By Jeff Brutman, Senior Staff, Publications



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HA Service Bulletins uploaded to GSPN in April, 2013:

Bulletin Number	Subject	Applicable Models
ASC201304100001	Subject: SE errors and Control Panel lock on the ME179KFETSR/AA Microwave/Convection oven. Background: The ME179KFETSR/AA Microwave oven has had a number of Control Box assembly failures. The failures are typically indicated by one or more of the following symptoms: 1. SE Error. If a microwave displays an “SE” error, this means there is a communications failure between the Touch Panel Controller on the ASSY PCB Main and the ASSY Touchpad itself. 2. The Control Panel locking and not allowing any entry via the Touchpad. The Control Dial ASSY will allow you to change selections, but you cannot enter the selection using the Touchpad. 3. Some Microwave functions turning on spontaneously, primarily the OTR lights or the exhaust fan.	ME179KFETSR/AA
ASC20130416001	Subject: New anti-tip bracket for ranges Background: The previous anti-tip bracket design could only be attached to the floor. If the flooring was wood, there was no issue, however, if the flooring was ceramic or tile, it was difficult to secure the anti-tip bracket.	All Ranges

HA GSPN Updates

continued



Bulletin Number	Subject	Applicable Models
ASC20130425001	Subject: Frozen Water Tank, Water Leaking Symptom: No water dispenses, no ice is produced, water leak in the fresh food section. Background: The damper under the water tank is not seated properly or is partially broken. This causes below-freezing temperatures at the water tank.	RF4267HABP, RF4267HARS, RF4267HAWP

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